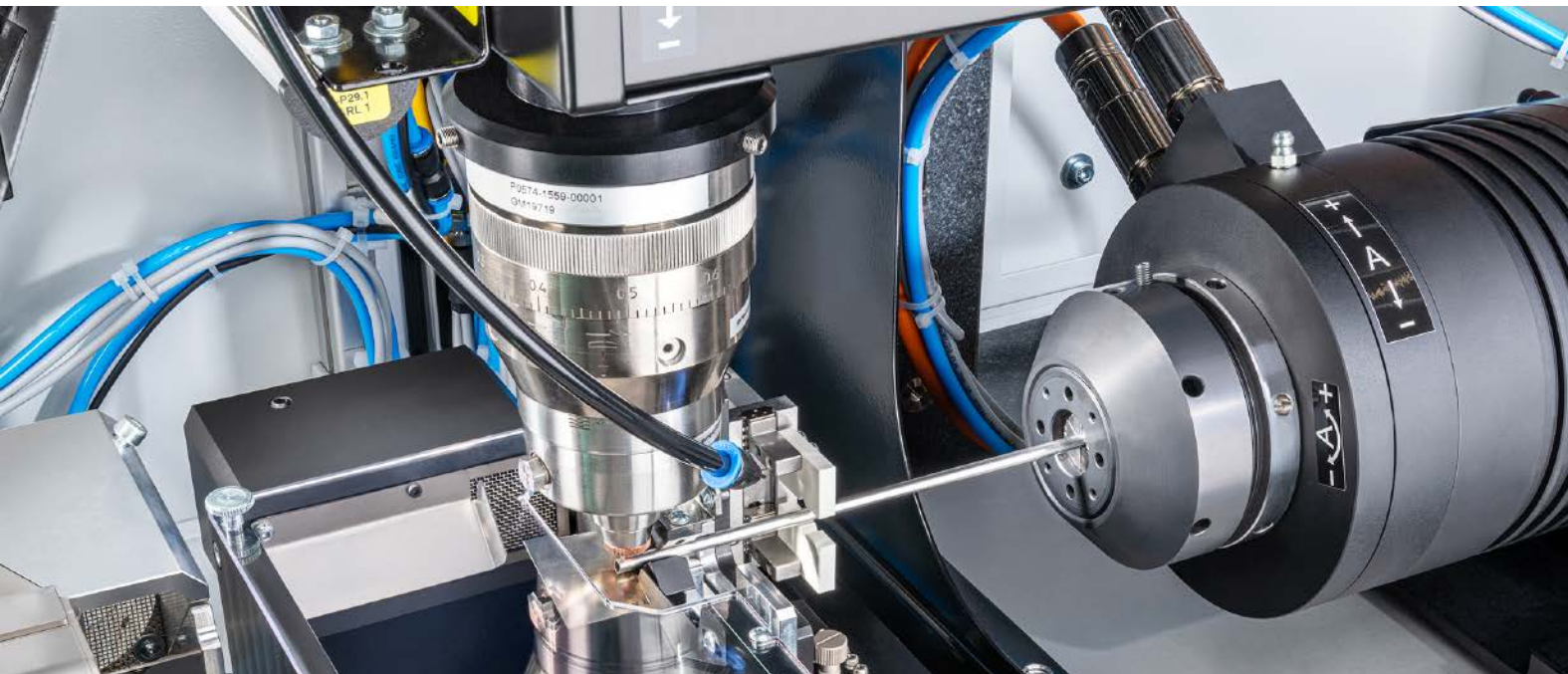




LLT Applikation GmbH |
Case Study Mechanical Engineering, Special Machine Construction

Control Technology and HMI for Precision Laser Processing Systems

We accompany our customers from planning to service — for the entire machine lifetime. For LLT Applikation GmbH, our Erfurt subsidiary REX Automation Technology supplied the CNC control E°EXC89, safety control E°SLC89, and I/O systems (UBM modules). A powerful industrial panel PC with a user-friendly interface (HMI) completes the portfolio for LLT Applikation laser machines.

“As REX AT, we are proud to support LLT Applikation in realizing their machine projects.”

Uwe Schulz | Sales Manager REX AT



Objective

For this project, the customer required not only the tailored hardware — control and equipment — but also the associated technical support as part of the implementation of control technology.

As a subsidiary of the Eckelmann Group, REX Automation Technology is a central part of the powerful, complementary network of automation experts. LLT Applikation GmbH relies on hardware from the Eckelmann Group for its laser systems.

The Customer

LLT Applikation is an internationally renowned company in laser microprocessing. In Ilmenau, Thuringia, laser precision parts are manufactured and concepts for the industrial use of lasers are developed with their own machinery. Ideas and machines in small and large series set the standard in this market segment. The second business field of the company is the development and manufacture of laser systems for high-precision laser microprocessing.

These laser systems are adapted to customer requirements and always delivered with a stable laser process.



› LLT Applikation GmbH, a specialist in laser microprocessing, relies on hardware from the Eckelmann Group for its laser systems.

Performance by Eckelmann

- › REX Automation Technology supplied the freely programmable control E°EXC89, I/O systems (UBM modules) as part of the automation.
- › Eckelmann supplied powerful industrial panel PCs to control the production processes.
- › The Eckelmann I/O system adapts to applications for modern machine concepts: from simple digital input through analog modules to special and safety modules for high-end applications.
- › Strengths of the I/O systems include the wide product range, compact design, and the integration of diagnostic functions.
- › Additionally, LLT uses a touch-optimized user interface (HMI) for processing machines developed by Eckelmann.

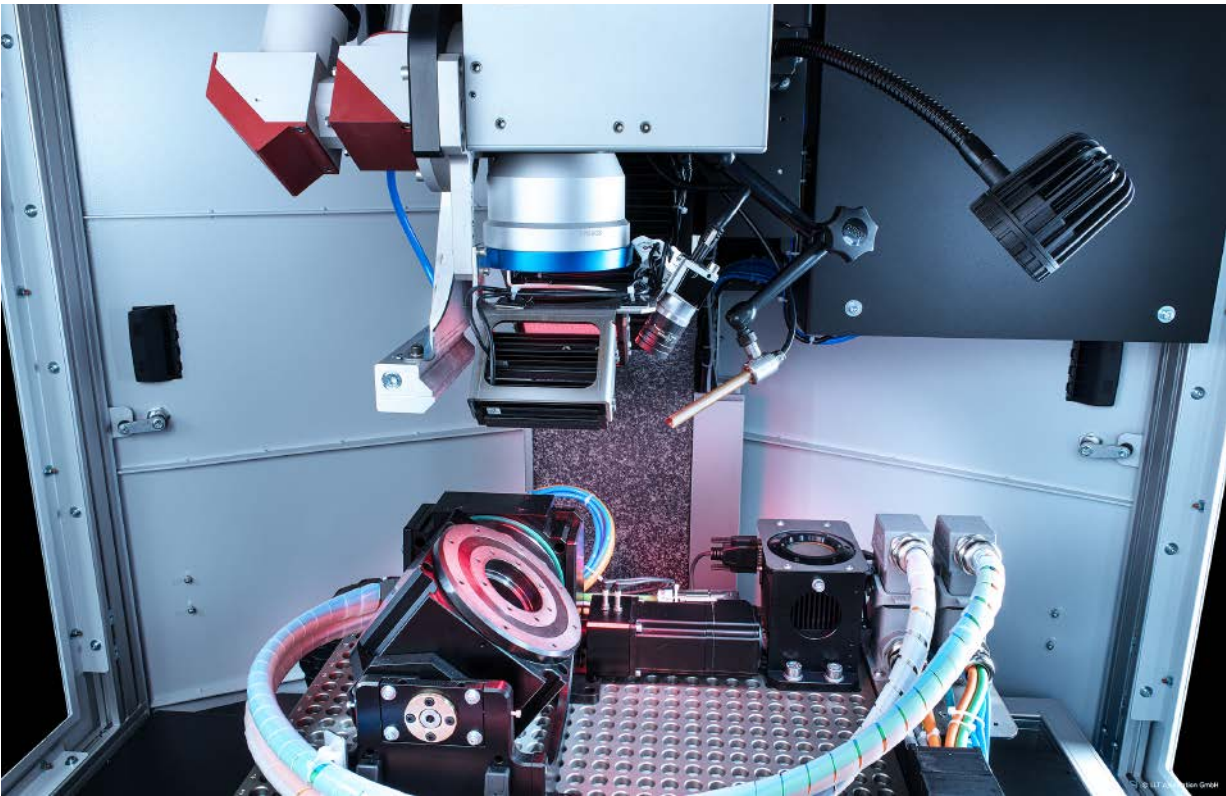
The System

LLT.tube – fully automatic, gentle & µ-accurate laser microprocessing

The challenges in the production and processing of fine and precision tubes are diverse. High-tech industries such as medical technology, sensor technology, or optics demand high precision and gentle handling of sensitive and costly materials, such as stents or hypotubes.

The LLT.tube was developed to meet these expectations precisely. Using an ultra-short pulse laser minimizes the heat-affected zone and associated thermal stress on the material as well as the achievable dimensions of the cutting or drilling contours. The material retains its desired properties; residues in the form of melt are avoided.

Machines delivered, over	Up to	Repeatability +/-	Path Accuracy +/-
100	7 Axes	1 µm	3 µm



› CNC control technology and HMI for precision laser processing systems: REX AT supplied the CNC control E°EXC89, safety control E°SLC89, I/O systems (UBM modules), and a powerful industrial panel PC with a user-friendly interface (HMI).

Special Features

- › LLT Applikation uses a machine park with 25 self-developed systems in four different series types. They are used not only for customer orders but also in their own production, for:
 - › Processing precision tubes (special know-how) for the medical technology sector
 - › Developing processes in the in-house application laboratory and transferring them to production
- › LLT Applikation goes even further with its offer; from prototype production to series production, the company from Ilmenau, Thuringia, offers a manufacturing solution for small to medium quantities as a supplier. Only when quantities justify the investment does the customer invest in the machine.



Do you have any questions?

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Your Partner for Industrial Automation
& Digitalization

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